

Abstract

The heat from various portions of a fuel cell power plant (110) are redistributed in a manner allowing
5 desired modification of/to the heat removal means (152,156), e. g., radiator (152), included in the coolant loop for the fuel cell stack assembly (CSA) (12). A humidifier (70) added in the coolant loop (114) and the inlet oxidant (air) stream (134') serves to relatively
10 increase the humidification of the inlet air while removing heat from the coolant prior to entering the CSA (12). The combined effects are to relatively increase the temperature of the coolant exiting the CSA without similarly increasing the temperature of the coolant
15 entering the CSA, and to relatively increase the temperature differential ("pinch") between the coolant entering the heat removal means and the cooling air of the heat removal means (152, 156). This latter effect permits a relative reduction in the size/capacity of the
20 heat removal means (152, 156).